# **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L3	1	"10/562652"	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:53
L4	1488	(Oshiyama and Tomohiro).in. (Kita and Hiroshi).in. (Katoh and Eisaku).in.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:54
L5	330305	(electrolumines\$ or electro-lumines\$ or opto-electr\$ or oled or light-emit\$ or emissive or luminescen\$ or 428/690.ccls. or 428/917.ccls. or 313/504.ccls. or 313/506.ccls.)	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L6	312	4 and 5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L7	24	phosphoresc\$.clm. and I6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L8	1	withdrawing\$.clm. and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:55
L9	1	withdraw\$.clm. and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:57
L10	4	lumo.clm. and 6	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:59
L11	24	10 or 7	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 15:56

12/17/07 4:08:24 PM Page 1

# **EAST Search History**

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L12	120	((phosphoresc\$ or organometal\$ or (metal adj3 complex) or iridium ) and (element or device or pixel or oled) and (oled or electroluminesc\$ or light-emit\$ or emissive or luminescen\$ or luminous or opto-electr\$ or emission) and (sulfonyl or "so.sub.2r" or cyanine or cyanide or "cn" or electron-withdraw\$ or (electron adj4 withdraw\$)) and (anode or electrode or cathode)).clm.	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 16:02
L13	34	(ev or bandgap or homo or lumo or level or energy).clm. and l12	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 16:03
L14	34	13 and 5	US-PGPUB; USPAT; EPO; JPO; DERWENT	OR	ON	2007/12/17 16:03

# STN search - 10/562,652

FILE COVERS 1907 - 17 Dec 2007 VOL 147 ISS 26 (20071214/ED) FILE LAST UPDATED: 14 Dec 2007 Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at: (Registry Numbers) http://www.cas.org/infopolicy.html => e us20070099025/pn E1 US2007099023/PN E2 US2007099024/PN E3 1 --> US2007099025/PN E4US2007099026/PN US2007099027/PN E5 E6 US2007099028/PN E7 US2007099030/PN E8 US2007099031/PN E9 US2007099032/PN E10 US2007099033/PN US2007099034/PN E11 E12 US2007099035/PN => s e3 1 US2007099025/PN L1=> d allANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN L12005:35085 CAPLUS AN 142:102910 DN Entered STN: 14 Jan 2005 ED Organic electroluminescent device, illuminating device, and display TIOshiyama, Tomohiro; Kita, Hiroshi; Katoh, Eisaku INKonica Minolta Holding, Inc., Japan PAPCT Int. Appl., 80 pp. SO CODEN: PIXXD2 Patent LAJapanese IC ICM H05B033-22 ICS H05B033-14; G02F001-1335 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related CC Properties) Section cross-reference(s): 74 FAN. CNT 1 APPLICATION NO. DATE PATENT NO. KIND DATE 20050113 20040625 WO 2005004549 WO 2004-JP9391 A1 PIW: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG 20060426 EP 2004-746860 20040625 EP 1651013 Al R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,

IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR

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CN 1817066

US 2007099025

CN 2004-80019019

US 2005-562652

20040625

20051227 <--

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PRAI JP 2003-193519 A 20030708
    WO 2004-JP9391 W
                               20040625
CLASS
 PATENT NO. CLASS PATENT FAMILY CLASSIFICATION CODES
 WO 2005004549
                       H05B033-22
                ICM
                       H05B033-14; G02F001-1335
                ICS
                       H05B0033-22 [ICM, 7]; H05B0033-14 [ICS, 7]; G02F0001-1335
                IPCI
                       [ICS, 7]; G02F0001-13 [ICS, 7, C*]
                       H05B0033-14 [I,C*]; H05B0033-14 [I,A]; H05B0033-22
                IPCR
                       [I,C*]; H05B0033-22 [I,A]
                       H01L051/00M6; H01L051/00M6H8; H01L051/00M6H14
                ECLA
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                       H01L051/00M6; H01L051/00M6H8; H01L051/00M6H14
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                IPCI
                       [I,A]; G02F0001-13 [I,C*]
                       HO1L051/00M6; H01L051/00M6H8; H01L051/00M6H14
                ECLA
                IPCI
                       HO1L0051-54 [I,A]; H01L0051-50 [I,C*]
 US 2007099025
                        428/690.000; 428/917.000; 313/504.000; 313/506.000
                NCL
     An organic electroluminescent device comprising at least a light-emitting
AB
     layer containing a phosphorescent compound between an anode and a cathode is
     characterized by comprising an adjoining layer so arranged between the
     light-emitting layer and the cathode as to be adjacent to the
     light-emitting layer and containing a compound with an electron-withdrawing
     group having an HOMO at -5.7 eV to -7.0 eV and an LUMO at -1.3 eV to -2.3
     eV.
     org electroluminescent device display illumination app
ST
     Light sources
IT
        (backlight; organic electroluminescent device, illumination apparatus and
        display)
IT
     Electroluminescent devices
        (displays; organic electroluminescent device, illumination apparatus and
        display)
IT
     Luminescent screens
        (electroluminescent; organic electroluminescent device, illumination
apparatus
        and display)
     Electroluminescent devices
IT
     Phosphorescent substances
        (organic electroluminescent device, illumination apparatus and display)
                                817638-42-9 817638-43-0 817638-44-1
     372956-40-6 817638-41-8
IT
     817638-45-2 817638-46-3 817638-47-4 817638-48-5 817638-49-6
     817638-50-9 817638-51-0 817638-53-2 817638-55-4 817638-56-5
     RL: DEV (Device component use); USES (Uses)
        (organic electroluminescent device, illumination apparatus and display)
              THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD
RE.CNT 6
RE
(1) Nippon Hoso Kyokai; JP 200386376 A 2003
(2) President Of Osaka University; JP 200345663 A 2003
(3) Toppan Printing Co Ltd; JP 08-8065 A 1996 CAPLUS
(4) Toppan Printing Co Ltd; JP 2000150168 A 2000 CAPLUS
(5) Toyota Central Research And Development Laboratories Inc; EP 1202608 A2
    2002 CAPLUS
(6) Toyota Central Research And Development Laboratories Inc; JP 2002203683 A
    2002 CAPLUS
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ALL E# DEFINITIONS DELETED

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E3	1	817638-42-9/BI
E4	1	817638-43-0/BI
E5	1	817638-44-1/BI
E6	1	817638-45-2/BI
E7	1	817638-46-3/BI
E8	1	817638-47-4/BI
E9	1	817638-48-5/BI
E10	1	817638-49-6/BI
E11	1	817638-50-9/BI
E12	1	817638-51-0/BI
E13	1	817638-53-2/BI
E14	1	817638-55-4/BI
E15	1	817638-56-5/BI

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STRUCTURE FILE UPDATES: 16 DEC 2007 HIGHEST RN 958294-65-0 DICTIONARY FILE UPDATES: 16 DEC 2007 HIGHEST RN 958294-65-0

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

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REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

http://www.cas.org/support/stngen/stndoc/properties.html

=> s e1-e15

1 372956-40-6/BI (372956-40-6/RN) 1 817638-41-8/BI (817638-41-8/RN) 1 817638-42-9/BI (817638-42-9/RN) 1 817638-43-0/BI (817638-43-0/RN) 1 817638-44-1/BI (817638-44-1/RN) 1 817638-45-2/BI (817638-45-2/RN)1 817638-46-3/BI (817638-46-3/RN) 1 817638-47-4/BI (817638-47-4/RN)1 817638-48-5/BI (817638-48-5/RN) 1 817638-49-6/BI (817638-49-6/RN)1 817638-50-9/BI (817638-50-9/RN) 1 817638-51-0/BI (817638-51-0/RN)1 817638-53-2/BI (817638-53-2/RN) 1 817638-55-4/BI (817638-55-4/RN)1 817638-56-5/BI (817638-56-5/RN)

L2

15 (372956-40-6/BI OR 817638-41-8/BI OR 817638-42-9/BI OR 817638-43 -0/BI OR 817638-44-1/BI OR 817638-45-2/BI OR 817638-46-3/BI OR 817638-47-4/BI OR 817638-48-5/BI OR 817638-49-6/BI OR 817638-50-9/BI OR 817638-51-0/BI OR 817638-53-2/BI OR 817638-55-4/BI OR 817638-56-5/BI)

=> d ide 1YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L2 ANSWER 1 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-56-5 REGISTRY

ED Entered STN: 21 Jan 2005

CN 1H-Imidazole, 4-methyl-1,2,5-tris[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)

MF C25 H15 F9 N2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 2 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-55-4 REGISTRY

ED Entered STN: 21 Jan 2005

CN 9H-Fluorene, 9,9-bis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)

MF C29 H14 F12

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)
1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 3 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-53-2 REGISTRY

ED Entered STN: 21 Jan 2005

CN 9H-Carbazole, 9-[3,5-bis(trifluoromethyl)phenyl]-3,6-bis(pentafluorophenyl)- (9CI) (CA INDEX NAME)

MF C32 H9 F16 N

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

$$F_3C$$

$$F$$

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# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 4 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-51-0 REGISTRY

ED Entered STN: 21 Jan 2005

CN Propanedinitrile, 2,2',2''-(nitrilotri-4,1-phenylene)tris[2-phenyl- (9CI) (CA INDEX NAME)

MF C45 H27 N7

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

2 REFERENCES IN FILE CA (1907 TO DATE)
2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 5 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-50-9 REGISTRY

ED Entered STN: 21 Jan 2005

CN 1,1':4',1'':3'',1''':4''',1''''-Quinquephenyl, 4,4''''bis(trifluoromethyl)-5''-[4'-(trifluoromethyl)[1,1'-biphenyl]-4-yl]- (9CI)
(CA INDEX NAME)

MF C45 H27 F9

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

- L2 ANSWER 6 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
- RN 817638-49-6 REGISTRY
- ED Entered STN: 21 Jan 2005
- CN 1,3,4-Oxadiazole, 2,2'-(1,3-phenylene)bis[5-[4-(trifluoromethyl)phenyl](CA INDEX NAME)

MF C24 H12 F6 N4 O2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 7 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-48-5 REGISTRY

ED Entered STN: 21 Jan 2005

CN 1H-Benzimidazole, 2,2',2''-(1,3,5-benzenetriyl)tris[1-[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)

MF C48 H27 F9 N6

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 8 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-47-4 REGISTRY

ED Entered STN: 21 Jan 2005

CN 4H-1,2,4-Triazole, 3,4,5-tris[4-(methylsulfonyl)phenyl]- (CA INDEX NAME)

MF C23 H21 N3 O6 S3

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

\*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 9 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-46-3 REGISTRY

ED Entered STN: 21 Jan 2005

CN 4H-1,2,4-Triazole, 3,4,5-tris[4-(trifluoromethyl)phenyl]- (CA INDEX NAME)

MF C23 H12 F9 N3

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 10 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-45-2 REGISTRY

ED Entered STN: 21 Jan 2005

CN 1,10-Phenanthroline, 4,7-diphenyl-2,9-bis(trifluoromethyl)- (CA INDEX NAME)

MF C26 H14 F6 N2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 11 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-44-1 REGISTRY

ED Entered STN: 21 Jan 2005

CN Propanedinitrile, bis[4-[bis[3,5-bis(trifluoromethyl)phenyl]amino]phenyl](9CI) (CA INDEX NAME)

MF C47 H20 F24 N4

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

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# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

2 REFERENCES IN FILE CA (1907 TO DATE)

2 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 12 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-43-0 REGISTRY

ED Entered STN: 21 Jan 2005

CN Benzenamine, 4,4'-[2,2,2-trifluoro-1-(trifluoromethyl)ethylidene]bis[N,N-bis[3,5-bis(trifluoromethyl)phenyl]- (CA INDEX NAME)

MF C47 H20 F30 N2

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

# \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

3 REFERENCES IN FILE CA (1907 TO DATE)

3 REFERENCES IN FILE CAPLUS (1907 TO DATE)

L2 ANSWER 13 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN

RN 817638-42-9 REGISTRY

ED Entered STN: 21 Jan 2005

CN 1,4-Benzenediamine, N,N-bis[4-[bis(pentafluorophenyl)amino]-2,5bis(trifluoromethyl)phenyl]-N',N'-bis(pentafluorophenyl)-2,5bis(trifluoromethyl)- (9CI) (CA INDEX NAME)

MF C60 H6 F48 N4

SR CA

LC STN Files: CA, CAPLUS, USPATFULL

- 1 REFERENCES IN FILE CA (1907 TO DATE)
  1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 14 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
- RN 817638-41-8 REGISTRY
- ED Entered STN: 21 Jan 2005
- CN 1,3,5-Benzenetriamine, N,N,N',N',N',N''-hexakis[3,5-bis(trifluoromethyl)phenyl]- (9CI) (CA INDEX NAME)
- MF C54 H21 F36 N3
- SR CA
- LC STN Files: CA, CAPLUS, USPATFULL

## \*\*PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT\*\*

- 1 REFERENCES IN FILE CA (1907 TO DATE)
- 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)
- L2 ANSWER 15 OF 15 REGISTRY COPYRIGHT 2007 ACS on STN
- RN 372956-40-6 REGISTRY
- ED Entered STN: 03 Dec 2001
- CN 1,1':4',1'':3'',1''':4''',1''''-Quinquephenyl, 4,4''''-difluoro-5''-(4'-fluoro[1,1'-biphenyl]-4-yl)- (CA INDEX NAME)
- OTHER NAMES:
- CN 1,3,5-Tris(4-fluorobiphenyl-4-yl)benzene
- CN F-TBB
- MF C42 H27 F3
- SR CA
- LC STN Files: CA, CAPLUS, CASREACT, USPATZ, USPATFULL

17 REFERENCES IN FILE CA (1907 TO DATE)

17 REFERENCES IN FILE CAPLUS (1907 TO DATE)

#### => FIL REGISTRY

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	29.70	36.11
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	0.00	-0.78

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http://www.cas.org/support/stngen/stndoc/properties.html

=> SET TERMSET E#

SET COMMAND COMPLETED

=> DEL SEL Y

=> SEL L2 4 RN

E1 THROUGH E1 ASSIGNED

=> S E1/RN

L3 1 817638-51-0/RN

=> SET TERMSET LOGIN

SET COMMAND COMPLETED

=> FIL CAPLUS

TOTAL SINCE FILE COST IN U.S. DOLLARS SESSION ENTRY 36.64 0.53 FULL ESTIMATED COST SINCE FILE TOTAL DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS) SESSION ENTRY -0.780.00 CA SUBSCRIBER PRICE

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FILE COVERS 1907 - 17 Dec 2007 VOL 147 ISS 26 FILE LAST UPDATED: 14 Dec 2007 (20071214/ED)

Effective October 17, 2005, revised CAS Information Use Policies apply. They are available for your review at:

http://www.cas.org/infopolicy.html

=> S L3

L4 2 L3

=> DIS L4 1- IBIB IABS
YOU HAVE REQUESTED DATA FROM 2 ANSWERS - CONTINUE? Y/(N):Y
THE ESTIMATED COST FOR THIS REQUEST IS 5.66 U.S. DOLLARS
DO YOU WANT TO CONTINUE WITH THIS REQUEST? (Y)/N:Y

L4 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:138480 CAPLUS

DOCUMENT NUMBER: 142:249440

TITLE: Organic electroluminescent elements with improved

brightness, emission efficiency, and durability and

lighting apparatus and displays using them Oshiyama, Tomohiro; Kato, Eisaku; Suzurizato,

Yoshiyuki; Kita, Hiroshi

Konica Minolta Holdings, Inc., Japan PATENT ASSIGNEE(S):

Jpn. Kokai Tokkyo Koho, 57 pp. SOURCE:

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

INVENTOR(S):

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
JP 2005044791	A	20050217	JP 2004-195397		20040701
PRIORITY APPLN. INFO.:			JP 2003-193520	A	20030708

OTHER SOURCE(S): MARPAT 142:249440

ABSTRACT:

The elements, useful for blue- or white-emitting backlights for LCD, have layers containing triarylamine derivs. bearing electron-withdrawing groups adjacent to light-emitting layers between anodes and cathodes. The layers show good hole-barrier properties.

ANSWER 2 OF 2 CAPLUS COPYRIGHT 2007 ACS on STN L4

2005:35085 CAPLUS ACCESSION NUMBER:

DOCUMENT NUMBER: 142:102910

Organic electroluminescent device, illuminating TITLE:

device, and display

Oshiyama, Tomohiro; Kita, Hiroshi; Katoh, Eisaku INVENTOR(S):

Konica Minolta Holding, Inc., Japan PATENT ASSIGNEE(S):

PCT Int. Appl., 80 pp. SOURCE:

CODEN: PIXXD2

Patent DOCUMENT TYPE: LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT:

PATENT INFORMATION:

PAT	ENT 1	NO.			KINI	)	DATE						NO.		D <i>i</i>	ATE		
WO	2005	0045	<b></b>		A1	_	2005	0113			4				20	0040	625	
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EP	1651	013			A1		2006	0426		EP 2	004-	7468	60		2	0040	625	
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		IE,	SI,	LT,	LV,	FI,	RO,	MK,	CY,	AL,	TR,	BG,	CZ,	EE,	HU,	PL,	SK,	HR
CN	1817	066			A		2006	0809	(	CN 2	004-	8001	9019		2	0040	625	
US	2007	0990	25		<b>A</b> 1		2007	0503	1	US 2	005-	5626	52		20	0051	227	
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#### ABSTRACT:

An organic electroluminescent device comprising at least a light-emitting layer containing a phosphorescent compound between an anode and a cathode is characterized by comprising an adjoining layer so arranged between the light-emitting layer and the cathode as to be adjacent to the light-emitting layer and containing a

compound with an electron-withdrawing group having an HOMO at -5.7 eV to -7.0 eV and an LUMO at -1.3 eV to -2.3 eV.

REFERENCE COUNT:

THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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ACCESSION NUMBER: 2005:138480 CAPLUS

DOCUMENT NUMBER: 142:249440

TITLE: Organic electroluminescent elements with improved

brightness, emission efficiency, and durability and

lighting apparatus and displays using them VENTOR(S): Oshiyama, Tomohiro; Kato, Eisaku; Suzurizato,

INVENTOR(S): Oshiyama, Tomohiro; Kato, E Yoshiyuki; Kita, Hiroshi

PATENT ASSIGNEE(S): Konica Minolta Holdings, Inc., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 57 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
JP 2005044791	A	20050217	JP 2004-195397		20040701
PRIORITY APPLN. INFO.:			JP 2003-193520	A	20030708

OTHER SOURCE(S): MARPAT 142:249440

ABSTRACT:

The elements, useful for blue- or white-emitting backlights for LCD, have layers containing triarylamine derivs. bearing electron-withdrawing groups adjacent to light-emitting layers between anodes and cathodes. The layers show good

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